

No. 15 • August 5, 1998

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## Field Day Scheduled

The 1998 University of Illinois Turfgrass and Landscape Field Day has been scheduled for August 19. This annual event provides up-to-date information and education to all professional turfgrass, nursery, landscape, and garden center personnel. This event is also an opportunity to visit the Landscape Horticulture Research Center and the Hartley Selections Garden.

Field Day activities will begin at 8:30 a.m.; results of current turfgrass, nursery, and landscape research will be displayed and explained during morning sessions. The afternoon program will feature a tradeshow, equipment demonstration, and workshops and classes. U of I horticulturists, educators, plant pathologists, and entomologists will be available to discuss research and answer questions. Bring samples of your plant problems for examination.

Make plans now to take advantage of this exceptional educational opportunity by taking part in Field Day. For further information, contact Tom Voigt, University of Illinois Extension Turfgrass Specialist, at (217) 333-7847. (*Tom Voigt*)

## PLANT DISEASE

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### Anthracnose of Hosta

El Niño sure has given plant pathologists plenty of business. The fungal diseases that we see only in very wet seasons have been causing concern among gardeners, commercial growers, and consultants. In most years, hostas are a sure bet to give a good show in shady locations. This year we have seen tattered holes from slug feeding, edge burn from scorch or scald, and tattered leaves with brown spots as a result of anthracnose.

The anthracnose fungus that infects hosta is a *Colletotrichum* species. If you have a hand lens or microscope, look for the fruiting bodies, called acervuli. They have little black hairs, called setae, sticking out of the center of the structure. The wet or humid

conditions we've had lately mean that you don't have to put the plant material in a humidity chamber to see these diagnostic structures. Look for irregularly shaped tan to brown spots on the leaves. The spots often lose their centers and leaves become tattered. The setae can be seen along the brown edges of the tattered spots.

There are some fungicides that can be used to protect healthy foliage. The copper fungicides are registered for this use. Be certain to read the label carefully to be certain that hosta is listed as a host that can be sprayed. (Often the concern is phytotoxicity to the host plant.) The anthracnose fungus can overwinter on the dead leaves, so be sure to remove dead leaves from the garden in the fall. Crowded plants provide ideal conditions for growth of fungi because of the high humidity in this microclimate. Water plants early in the day so that the leaves will dry more quickly. Also try to water the soil rather than the foliage. (*Nancy Pataky*)

### Rudebeckia (Black-Eyed Susan) Leaf Spots

This may seem like a minor crop to be concerned about, but the Plant Clinic has received many Rudebeckias in the last several weeks. This is not a host that usually has problems in our area, but this year we have seen leaf spot problems, in some cases covering entire leaves.

Both fungal and bacterial leaf diseases attack this host. All will cause spotting in some shade of brown or black, but the bacterial leaf spots are usually angular, with edges delineated by small veins, while the fungal leaf spots are more irregular rounded areas. Fungal pathogens usually include *Cercospora*, *Phyllosticta*, or *Septoria*, whereas the bacterial pathogens include *Pseudomonas* or *Xanthomonas*. The cultural control measures listed for anthracnose of hosta in the previous article will help to manage these diseases, regardless of pathogen. If you try a fungicide to control the disease, you will have to know whether a bacterium or a fungus is involved. (*Nancy Pataky*)

## Turf Rust is Back

Most of us think of rust of turf as a cool-season, spring or fall disease. Although there are a few cool-season rust diseases, most of the rusts of turfgrasses are favored by four to eight hours of overcast skies, temperatures between 70°F and 80°F, high humidity, and heavy dews or light rains followed by eight to sixteen hours of high light, high temperatures, and slow drying of leaf surfaces. This may seem a bit complex, but it means simply that the rusts are favored by warm, cloudy, humid conditions followed by hot, sunny conditions. Over much of Illinois, these conditions have been met in the last two weeks, so it should not be surprising that the disease is back.

All turfgrasses can be infected with rust fungi, but there are definitely differences in resistance within the turf species. Early symptoms of rust diseases include light yellow flecks on leaves and stems, giving the lawn a light green or yellow cast. The flecks enlarge until spores of the fungus are produced, causing the leaf tissue to rupture and expose powdery, spore-filled spots called rust pustules. The pustules may be yellow, orange, brown, or red. The spores rub off very easily on hands, shoes, clothing, and animals. The turf becomes weakened, unsightly, and more susceptible to injury from environmental stresses and attack by other pathogens.

Grasses growing slowly under stressful environmental conditions are most susceptible to rust, particularly when water, fertility, and soil conditions are inadequate for good growth. Logically, control measures should target stress areas. Rarely are fungicides recommended to control rust in a home lawn. Because leaf wetness is required for infection, it is important to water thoroughly early in the day so the turf can dry before night. Water turf infrequently but to a depth of six inches or more at each watering. Avoid frequent, light sprinklings. Fertilize to keep the grass growing about one inch per week in summer and early fall droughts. Use a balanced fertilizer; do not apply excessive nitrogen. As the grass grows, it pushes rust-infected leaves outward, making infected blades easy to mow and remove. Mow regularly to remove infected leaf tips, but avoid mowing below the recommended height for the particular turf species or cultivar. Prune surrounding trees and shrubs to improve light penetration and air circulation around densely shaded areas. Badly infected areas of turf may have to be renovated and reseeded. The best time to do this is mid- to late-August. Be certain to use a blend of turf cultivars with resistance to rust, as listed in *Report on Plant Diseases* No. 412. (Nancy Pataky)

## “Wet Feet” of Trees, Shrubs, and Flowers

Here is a problem that is no longer considered an exception to the rule or unusual for our area. Two or three years of abundant rainfall have set the stage for the root problems often referred to as wet feet (“feet” referring to roots). Symptoms are often the same as those resulting from a lack of water and include withering of leaves, little terminal growth, yellowing of foliage, and dieback of shoots and roots. Some woody plant species are particularly sensitive to wet conditions, including yews, rose, white birch, Norway and sugar maples, flowering dogwood, and forsythia, to name only a few. Water tolerance of many plants is discussed in Sinclair, Lyon, and Johnson’s book, *Diseases of Trees and Shrubs*. Most good tree-identification books also list such sensitivities as part of the species description.

Roots need oxygen to grow and to absorb nutrients. In water-saturated soil, the oxygen content is low; without oxygen, roots cannot respire properly and cannot take up water. Even though there is an abundance of water, it cannot be absorbed by the plant. For long-term management of such situations, you must improve drainage, lighten the soil with a mixture of organic matter and sand, and avoid too much additional water. Keep in mind that improving drainage includes draining away from the planting site. A well-prepared planting hole with plenty of organic matter still holds water like a bucket if it is in a clay soil.

If you are not certain if water is the problem, dig up some of the soil around the suspect plant. In a typical situation with too much water, the soil is saturated and standing water may be evident. Roots are black or brown internally instead of white, as with healthy, new roots. In most cases, fungicides do not help (they help protect healthy plants from root-rot pathogens, but they do not revive dead roots). The water problem must be alleviated for new roots to form.

In some cases, wet soils predispose plants to root rots. For instance, *Pythium* and *Phytophthora* are common water-mold fungi that invade stressed plants in wet soils. If the water problem has been eliminated and root rot is still present, then a root-rot fungus might be involved as well. This is particularly true if not all plants in a bed are affected. In such a case, consult a lab or specialist trained to identify root-rot fungi. Root rots will cause roots to be discolored brown, black, or pink. In early stages, the tips of roots are discolored or lesions are present on the roots. In more advanced stages, the entire roots rot, at which point plant decline will be very noticeable. Soil fungicide drenches are available to stop the progress

of root rots in herbaceous plants and small shrubs, but there is nothing that can be used on mature trees.

Information on root rots is available in *Report on Plant Diseases* No. 615 (Damping-Off and Root Rot of House Plants and Garden Flowers), No. 602 (Armillaria Root Rot of Trees and Shrubs), and No. 664 (Phytophthora Root Rot and Dieback of Rhododendrons and Azaleas). (Nancy Pataky)

## INSECTS

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### Scouting Report

**Twig pruner** is active. Be watchful for branches up to three feet long dropping from oak, elm, and other trees. If twig pruner is present, the wood will be smoothly severed and the bark will be torn and ragged. If twig girdler is present, the bark and sapwood will be cut off, but the heartwood or pith will have a ragged, broken end. Because attacked trees usually lose few branches relative to the number on the tree and because attacked trees tend to be very large and expensive to treat, insecticide spraying is usually not recommended. Once the branches start to drop, it is usually too late to treat anyway. Gathering up and destroying the fallen branches by burning, chipping, or burying may reduce the problem next year.

**Annual white grub** larvae are present throughout the state. They were found in northeastern Illinois on July 27. This is at least a week earlier than usual and reflects the adult beetles emerging one to two weeks early this year throughout the state. Scouting should begin now, particularly in irrigated turf in areas where nonwatered turf was dry and brownish in late June and early July. Usually at least ten to twelve grubs per square foot are needed to cause turf damage later. However, three to five grubs per square foot may be enough to attract raccoons, skunks, and birds if their damage has been a problem in the past. If numbers warranting treatment are found, use shorter-acting insecticides such as trichlorfon (Dylox), bendiocarb (Turcam, Intercept), or diazinon.

**Fall webworm** is numerous in central Illinois and is present throughout the state. In northern Illinois, all of the webs should be small enough to control by pruning out the web. Remember that this caterpillar stays within the web to feed, so pruning off the webs at any time of day will eliminate almost all of the caterpillars associated with them. In the central and southern areas of the state, insecticide spraying may be a better option than pruning on big webs where major branches are webbed on smaller trees. *Bacillus*

*thuringiensis kurstaki* (Dipel, Thuricide, and others) and various chemical insecticides will be effective, particularly if spray pressure is high enough to get inside the web. Fall webworm spreads out its egg hatch over several weeks, so young colonies with small webs will still be produced for at least the next month throughout the state. Keep the pruners handy.

**Sod webworm** is likely to be found in areas of northern Illinois and in other areas where rainfall has been spotty. This insect does best in drier areas such as south- or west-facing slopes. Irregular brownish areas of turf are the result of thatch showing through after the leaf blades have been eaten off. Greenish caterpillar feces may also be present in the thatch.

**Ash flower gall** is numerous in areas of Chicago. Many of the galls appear as fuzzy green balls one-half to one inch in diameter. Some of the galls have already turned brown. There's really nothing that can be done at this time, but you might warn clients that the brown galls will persist into the winter and become very noticeable after leaf drop in the fall. These galls are caused by mites that attack the male flowers. They do not affect tree health. (Phil Nixon; staff at The Morton Arboretum)

### Bald Cypress Rust Mite

This microscopic mite is an eriophyid mite that is most active during the warm season. The mite is active now in Ohio, and characteristic damage is being seen in Illinois. Damage will appear as reddish brown interior needles.

The bald cypress eriophyid overwinters as plump females tucked into the crevices of the bark. After the new leaves form, these females reproduce, and slender mites begin to infest the needles. The mites rasp through the needle surface and extract the cell contents below. As warm weather arrives, the mites "bloom"—thousands can be found on a single leaf. You can see these mites with a 10-power hand lens, but their numerous, white cast skins are the easiest diagnostic characteristic. The mites themselves are a light brown color.

As the mites continue feeding, the needles of the leaves become yellowish and then reddish brown. In the past, this level of damage was not noticeable until late August. The mites are still quite active and may cause some undue stress to bald cypresses. Thus, damaged trees are likely to require treatment.

Unfortunately, bald cypress is very sensitive to horticultural oils—unlike hemlocks, spruces, and junipers. If you try to control this mite with oils, you'll do more damage than the mites! Therefore, you

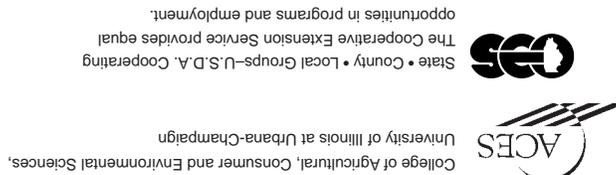
should rely on a more traditional pesticide. Carbaryl (Sevin), dicofol (Kelthane), and oxythioquinox (Morestan) will knock down this mite, but thorough coverage of the foliage is necessary. (Dave Shetlar, The Ohio State University; Phil Nixon)

Major authors are Phil Nixon, (217) 333-6650, and Fredric Miller, (708) 352-0109, entomologists; Nancy Pataky, plant pathologist, (217) 333-0519; and Tom Voigt and David Williams, horticulturists, (217) 333-0350. Phil Nixon is the executive editor of the Home, Yard and Garden Pest Newsletter. This newsletter is written by faculty in the Department of Natural Resources and Environmental Sciences and the Department of Crop Sciences. The newsletter is edited by Peggy Currid, typeset by Oneda VanDyke, and proofread by Kathy Robinson, all of Information Technology and Communication Services.

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